

### **Amendments to the Claims:**

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ and/or in ~~[[double brackets]]~~ if the deletion would be difficult to see.

### **LISTING OF CLAIMS:**

1-20. (Cancelled)

21. (Twice amended) An air intake system for controlling the flow of air into an internal combustion engine, the air intake system comprising an intake manifold having, a bore wall defining a main bore for receiving airflow, **a throttle assembly, and a seal, the seal surrounding said main bore and defining a single sealed region,** the bore wall including **at least** a plurality of vanes extending **partially** into the main bore **and only partially into flow through said sealed region** for reducing noise emanating from the intake system associated with airflow through the intake system, wherein said bore wall has a **substantially** circular cross section, **and where the throttle assembly is coupled upstream of the seal.**

22. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body having a throttle valve for controlling airflow through a main bore in fluid communication with an air intake manifold ~~wherein at least one of the throttle body and the air intake manifold include, the~~

system further comprising an air diffuser having a seal defining a sealed region and vanes extending into the main bore, said diffuser positioned downstream of the throttle valve and throttle body in the main bore to reduce noise created by air flowing past the throttle valve, said seal interfacing the diffuser and the throttle body.

23. (Currently amended) The air intake system of claim 22 wherein the air diffuser comprises at least one vane spanning the main bore, where said diffuser has 11 vanes or less in parallel with one another.

24. (Currently amended) The air intake system of claim 23 wherein the at least one vane comprises a plurality of parallel vanes spanning at least a portion of the main bore, wherein a space between at least two of said plurality of vanes is about 3.5mm to 4.5mm.

25. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body, an air intake manifold, and an air diffuser arranged in the intake system downstream of the throttle body and upstream of a plurality of fuel injectors for reducing noise emanating from the intake system, the air diffuser having a single main bore defined by a bore wall and a set of vanes substantially equally spaced from one another and extending from a portion of the bore wall into the single main bore, where the main bore

**is coupled downstream of the throttle body via a seal surrounding the main bore.**

26. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body, an air intake manifold, and an air diffuser arranged in the intake manifold downstream of the throttle body and upstream of a plurality of fuel injectors for reducing noise emanating from the intake system, the air diffuser having a main bore defined by a bore wall and a plurality of radial vanes extending from at least a portion of the bore wall into the main bore, **wherein a space between at least two of said plurality of vanes is about 3.5mm to 4.5mm.**

27. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body, an air intake manifold, and an air diffuser arranged in the intake system to reduce noise emanating from the intake system due to air flowing through the throttle body, the air diffuser having a **single region** main bore defined by a bore wall and a first set of vanes spaced from one another and extending parallel to one another from a portion of the bore wall into the **single region** main bore, and a second set of vanes spaced from one another and extending parallel to one another from a different portion of the bore wall than the first set into the **single region** main bore, **the first and second sets of vanes being in a common plane.**

28. (Twice amended) An air intake system for a fuel injected internal combustion engine including a throttle body, an air intake manifold, and an air diffuser arranged in the intake system to reduce noise emanating from the intake system due to air flowing through the throttle body, the air diffuser having a main bore defined by a bore wall and a first set of vanes spaced from one another and extending parallel to one another from a portion of the bore wall into the main bore, and a second set of vanes spaced from one another and extending parallel to one another from a different portion of the bore wall than the first set into the main bore, wherein the air diffuser comprises a separable component mounted between the throttle body and the air intake manifold, **the air diffuser further comprising a seal surrounding said main bore and defining a single region, where one of said first and second sets of vanes extends only partially into said region, and one of said first and second sets of vanes includes 11 vanes or less.**

29. (Currently amended) The air intake system of claim ~~[[27]]~~**28** wherein the air diffuser comprises a plate having an upstream face and a downstream face with the vanes extending beyond the face of at least one of the upstream and downstream faces.

30. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body having a first bore wall defining a first portion of a main bore and a throttle valve for controlling airflow through the main

bore, an air intake manifold in fluid communication with the throttle body and including a second bore wall defining a second portion of the main bore, the air intake system comprising an air diffuser disposed downstream of the throttle valve and having at least ~~one~~ two vanes extending across the main bore connecting to two locations of the bore wall to reduce noise associated with air flowing past the throttle valve, wherein said air flows through a space between said vanes of about 3.5mm to 4.5mm.

31. (Currently amended) An air intake system for a fuel injected internal combustion engine including a throttle body having a first bore wall defining a first portion of a main bore and a throttle valve for controlling airflow through the main bore, an air intake manifold in fluid communication with the throttle body and including a second bore wall defining a second portion of the main bore, the air intake system comprising a diffuser having a grid pattern for diffusing and redirecting air flowing through the main bore to reduce noise emanating through the intake system associated with air flowing past the throttle valve, wherein at least one hole in said grid is between 3.5 and 4.5mm.

32. (Twice amended) An air intake system for a fuel injected internal combustion engine including a throttle body having a first bore wall defining a first portion of a main bore and a throttle valve for controlling airflow through the main bore, an air intake manifold in fluid communication with the throttle body and including a second bore wall defining a second portion of the main bore, the

air intake system having means for diffusing and redirecting air flowing through the main bore to reduce noise associated with air flowing past the throttle valve, wherein said main bore has a substantially circular cross section, and where the means for diffusing and redirecting air flowing through the main bore being coupled between the first bore wall and the second bore wall, the means having a seal.

33. (Currently amended) An air intake system for controlling the flow of air into an internal combustion engine comprising:

a throttle body including a first bore wall defining a first portion of a main bore and a valve mounted within the first portion of the main bore with the valve being movable to selectively restrict flow of air through the main bore:

an intake manifold including a second bore wall defining a second portion of the main bore, with the second bore wall having an upstream end, and the manifold further including means for mounting the throttle body relative to the intake manifold such that the first and the second portions of the main bore align with one another, with the intake manifold being downstream of the throttle body, and with the manifold including an EGR inlet adjacent the upstream end of the second bore wall; and

a plurality of parallel vanes spaced from one another and in a common plane, the vanes disposed downstream of the valve and extending into the main bore to reduce sound generated within the intake system associated with air

flowing past the valve, the vanes coupled between the throttle body and intake manifold via a sealed connection.

34 -36. (Cancelled)

37. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow therethrough, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

redirecting air flowing past the intake throttle using 11 vanes or less a ~~plurality of vanes~~ extending in a common plane and in a first direction into the airflow downstream of the throttle valve to reduce noise associated with the air flowing past the throttle valve.

38. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow therethrough, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

redirecting air flowing past the intake throttle using ~~a plurality of~~ about 5 to 11 substantially evenly spaced parallel vanes extending into the airflow

downstream of the throttle valve and upstream of the intake manifold to reduce noise associated with the air flowing past the throttle valve.

39. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow through an intake passage, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

redirecting air flowing past the throttle valve using a diffusing element ~~spanning the intake passage~~ downstream of the throttle valve and upstream of the intake manifold to reduce noise associated with the air flowing past the throttle valve, said diffusing element having vanes protruding into the intake passage creating at least one space between 3.5mm and 4.5mm wide.

40. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow through an intake passage, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

redirecting air flowing past the throttle valve using a plurality of diffusing elements arranged in a grid pattern spanning at least a portion of the intake passage downstream of the throttle valve and upstream of the intake manifold to



reduce noise associated with the air flowing past the throttle valve, wherein at least one hole in said grid is between 3.5 and 4.5mm.

41. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow through an intake passage, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

modifying airflow past the throttle valve using a diffusing element having a grid pattern and extending across at least a portion of the intake passage downstream of the throttle valve and upstream of the fuel injectors to reduce noise associated with the air flowing past the throttle valve, where said diffusing element is surrounded by a seal creating only a single chamber containing said grid, said seal coupling the diffusing element downstream of the throttle body.

42. (Currently amended) An air diffuser for use with an air intake system of a fuel injected internal combustion engine having a throttle body and an air intake manifold, the air diffuser comprising:

a body defining an air passage and adapted for mounting between the throttle body and the intake manifold: and

a plurality of vanes extending from the body into the air passage to redirect air flowing through the passage and reduce associated noise;

where said body includes a seal creating only a single region surrounding said plurality of vanes and said air passage, wherein a space between at least two vanes is between about 3.5mm and 4.5mm.

43. (Cancelled)

44. (Currently amended) An air diffuser for use with an air intake system of a fuel injected internal combustion engine having a throttle body and an air intake manifold, the air diffuser comprising:

a body defining an air passage and adapted for mounting between the throttle body and the intake manifold, said body including a seal surrounding said air passage; and

a plurality of vanes spaced from one another and extending from the body only partially into the air passage to redirect air flowing through the passage and reduce associated noise.

45. (Previously presented) The air diffuser of claim 44 wherein the plurality of vanes spans the air passage.

46. (Previously presented) The air diffuser of claim 45 wherein the plurality of vanes are substantially parallel.

47. (Twice amended) An air diffuser for use with an air intake system of a fuel injected internal combustion engine having a throttle body and an air intake manifold, the air diffuser comprising:

a body defining an air passage and adapted for mounting between the throttle body and the intake manifold **said body including a seal surrounding air passage;**

a plurality of vanes spaced from one another and extending from the body into the air passage to redirect air flowing through the passage and reduce associated noise;

wherein the plurality of vanes spans the air passage; and

wherein the plurality of vanes forms a grid pattern.

48. (Twice amended) The air diffuser of claim 44 wherein at least some of the plurality of vanes extend inward from the body toward a center of the air passage, **and a space between at least two vanes is about 3.5mm to 4.5mm.**

49. (Previously presented) The air diffuser of claim 44 wherein the body defines a substantially circular air passage.

50. (Previously presented) The air diffuser of claim 44 wherein at least some of the plurality of vanes taper as they extend into the air passage.

51. (Currently amended) An air diffuser for use with an air intake system of an internal combustion engine including a throttle body and an air intake manifold, the air diffuser comprising:

a body adapted for mounting between the throttle body and the air intake manifold, the body having a main passage for accommodating airflow from the throttle body to the air intake manifold, **said main passage surrounded by a seal;**

a first set of vanes spaced from one another and extending from a first portion of the body into the main passage **and within said seal;** and

a second set of vanes spaced from one another and extending from a second portion of the body into the main passage **and within said seal,** wherein an average length of the first set of vanes is less than an average length of the second set of vanes.

52. (Currently amended) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the air intake system comprising an intake manifold having a wall defining a main air passage for receiving airflow, the wall including a diffusing element within the main air passage upstream of the plurality of fuel injectors for reducing noise emanating from the intake system associated with airflow through the intake system, **said element having only a single air passage surrounded by a seal, the seal further coupling the element to an upstream throttle body.**

53. (Cancelled)

54. (Previously presented) An air intake system for controlling the flow of air into an internal combustion engine including an EGR for selectively diverting a portion of exhaust gas to the intake system via an EGR inlet, the air intake system comprising an intake manifold having a wall defining a main air passage for receiving airflow, the wall including an integral air diffuser extending into the main bore upstream of the EGR inlet for reducing noise emanating from the intake system associated with airflow through the intake system and reducing upstream flow of EGR gases.

55. (Currently amended) A method for use in a fuel injected internal combustion engine having a throttle body with a throttle valve for selectively restricting airflow therethrough, an intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

modifying airflow through the intake using a plurality of vanes extending into the airflow downstream of the throttle valve to reduce noise associated with the air flowing past the throttle valve, **wherein a space between at least some of said plurality of vanes is about 3.5mm to 4.5mm.**

56. (Previously presented) A method for use in a fuel injected internal combustion engine having a plastic throttle body with a throttle valve for

selectively restricting airflow therethrough, a plastic intake manifold, and a plurality of fuel injectors for injecting fuel into the air downstream of the throttle valve, the method comprising:

modifying airflow through the plastic throttle body using a plurality of substantially evenly spaced parallel vanes integrally formed in the throttle body and extending into the airflow downstream of the throttle valve and upstream of the intake manifold to reduce noise associated with the air flowing past the throttle valve.

57. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine, the system comprising:

a plastic throttle body including a first wall defining a first portion of a main air passage and a valve mounted within the first portion of the main air passage with the valve being movable to selectively restrict flow of air through the main air passage, the plastic throttle body having an integrally formed air diffuser disposed downstream of the valve to reduce sound generated within the intake system associated with air flowing past the valve.

58. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine, the system comprising:

a plastic throttle body including a first wall defining a first portion of a main air passage and a valve mounted within the first portion of the main air passage with the valve being movable to selectively restrict flow of air through the main

air passage, the plastic throttle body having an integrally formed air diffuser disposed downstream of the valve to reduce sound generated within the intake system associated with air flowing past the valve; and

a plastic intake manifold including a second wall defining a second portion of the main air passage, with the second wall having an upstream end, and the manifold further including means for mounting the plastic throttle body relative to the plastic intake manifold such that the first and the second portions of the main air passage align with one another, with the plastic intake manifold being downstream of the plastic throttle body, and with the manifold including an EGR inlet adjacent the upstream end of the second wall.

59. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body including a first wall defining a first portion of a main air passage and a valve mounted within the first portion of the main air passage with the valve being movable to selectively restrict flow of air through the main air passage; and

a plastic intake manifold including a second wall defining a second portion of the main air passage, with the second wall having an upstream end, and the manifold further including means for mounting the plastic throttle body relative to the plastic intake manifold such that the first and the second portions of the main air passage align with one another, with the plastic intake manifold being

downstream of the plastic throttle body, and with the manifold including an EGR inlet adjacent the upstream end of the second wall, the plastic intake manifold having an integrally formed air diffuser disposed downstream of the valve and upstream of the fuel injectors to reduce sound generated within the intake system and to reduce upstream flow of EGR gasses past the throttle valve.

60. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a throttle valve disposed upstream of a plurality of fuel injectors, the system comprising:

a plastic intake manifold including a wall defining a main air passage, with the wall having an upstream end, the manifold further including an integrally formed air diffuser disposed downstream of the throttle valve and upstream of the fuel injectors to reduce sound generated within the intake system associated with air flowing past the throttle valve.

61. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having an intake manifold for receiving and distributing intake air to a plurality of cylinders comprising a plastic throttle body including a main air passage having a plurality of integrally formed plastic vanes extending into the main air passage for reducing noise associated with airflow therethrough.



62. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine comprising a plastic throttle body including a main air passage having a plurality of substantially equally spaced parallel vanes extending into the main air passage, the vanes being integrally formed with the plastic throttle body.

63. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body having a main air passage and a throttle valve mounted within the main air passage with the throttle valve being movable to selectively restrict flow of air through the main air passage, the plastic throttle body having an integrally formed air diffuser disposed downstream of the throttle valve and upstream of the fuel injectors to reduce sound generated within the intake system.

64. (Previously presented) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body having a main air passage and a throttle valve mounted within the main air passage with the throttle valve being movable to selectively restrict flow of air through the main air passage, the plastic throttle body having an integrally formed air diffuser having a grid pattern disposed

downstream of the throttle valve and upstream of the fuel injectors to reduce sound generated within the intake system.

65. (Currently amended) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body having a main air passage and a throttle valve mounted within the main air passage with the throttle valve being movable to selectively restrict flow of air through the main air passage; and

an air diffuser disposed downstream of the throttle valve and upstream of the fuel injectors to reduce sound generated within the intake system, **said diffuser having a plurality of vanes, with a space between at least some of said vanes being about 3.5mm to 4.5mm.**

66. (Currently amended) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body having a main air passage and a throttle valve mounted within the main air passage with the throttle valve being movable to selectively restrict flow of air through the main air passage; and

an air diffuser having a grid pattern disposed downstream of the throttle valve **and throttle body** and upstream of the fuel injectors to reduce sound generated within the intake system, **wherein at least one hole in said grid is**

**about 3.5 to 4.5mm wide, said diffuser further coupled to the throttle body via a seal surrounding the main air passage.**

67. (Currently amended) An air intake system for controlling the flow of air into a fuel injected internal combustion engine having a plurality of fuel injectors, the system comprising:

a plastic throttle body having a main air passage and a throttle valve mounted within the main air passage with the throttle valve being movable to selectively restrict flow of air through the main air passage; and

a plastic air diffuser disposed downstream of the throttle valve and upstream of the fuel injectors to reduce sound generated within the intake system, **said air diffuser including at least a plurality of spaces beign about 3.5mm to 4.5mm.**

68. (Twice amended) A system for controlling flow into an internal combustion engine, comprising:

a throttle body having a throttle valve for controlling airflow through a main bore;

an air intake manifold coupled to said throttle body, at least one of the throttle body and the air intake manifold including an air diffuser positioned downstream of the throttle valve in the main bore to reduce noise created by air flowing past the throttle valve, **said air diffuser defining a single air passage for said airflow;** and

fuel injectors located downstream of the throttle body.

69. (Previously presented) The system recited in Claim 68 wherein said fuel injectors are mounted to the intake manifold.

70. (Previously presented) The system recited in Claim 68 wherein the engine has a cylinder head, and said fuel injectors are mounted to said cylinder head.

71. (Twice amended) The system recited in Claim 68 wherein the intake manifold ~~[[is]]~~**comprises** plastic.

72. (Twice amended) The system recited in Claim 68 wherein the throttle body ~~[[is]]~~**comprises** plastic.

73. (Twice amended) The system recited in Claim 68 wherein the air diffuser ~~is plastic~~**comprises a seal**.

74. (Previously presented) The system recited in Claim 68 wherein the air diffuser comprises a first set of parallel vanes and a second set of parallel vanes forming a grid pattern.

75. (Previously presented) The system recited in Claim 68 wherein the air diffuser comprises at least one vane extending into the main bore.

76. (Previously presented) The system recited in Claim 68 wherein the air diffuser comprises at least one vane spanning the main bore.

77. (Twice amended) The system recited in Claim 68 wherein the air diffuser comprises at least one vane extending only partially into the main bore **and only partially into said single air passage.**

78. (Previously presented) The system recited in Claim 68 further comprising an EGR assembly located downstream of said throttle valve.

79. (Previously presented) The system recited in Claim 78 wherein said air diffuser is plastic.

80. (Previously presented) The system recited in Claim 68 wherein said engine is a V-type engine.

81. (Previously presented) The system recited in Claim 80 wherein said engine is a V-6 engine.

82. (Previously presented) The system recited in Claim 68 wherein said air diffuser is integrally formed in said manifold.

83. (Previously presented) The system recited in Claim 68 wherein said air diffuser is integrally formed in said throttle body.

84. (Previously presented) The system recited in Claim 68 wherein said air diffuser is plastic and said throttle body is plastic.

85. (Previously presented) The system recited in Claim 68 further comprising an EGR assembly located downstream of said throttle valve.

86. (New) An air intake system for controlling the flow of air into an internal combustion engine, the air intake system comprising an intake manifold, a throttle body, and an air diffuser, said diffuser having a seal, defining an airflow passage, where at least a plurality of vanes extend only partially into the airflow passage, said vanes surrounded by said seal, said diffuser for reducing noise emanating from the intake system associated with airflow through the intake system, and said seal coupled downstream of the throttle body.

87. (New) The system recited in Claim 86 wherein a space between at least two of said vanes is about 3.5mm to 4.5mm.

88. (New) The system recited in Claim 87 wherein 11 vanes or less extend only partially into said airflow passage.

89. (New) The system recited in Claim 87 wherein a first edge of said throttle opens toward said diffuser, and said plurality of vanes that extend only partially into the airflow passage are located to extend from a side of said passage in common with said first edge.